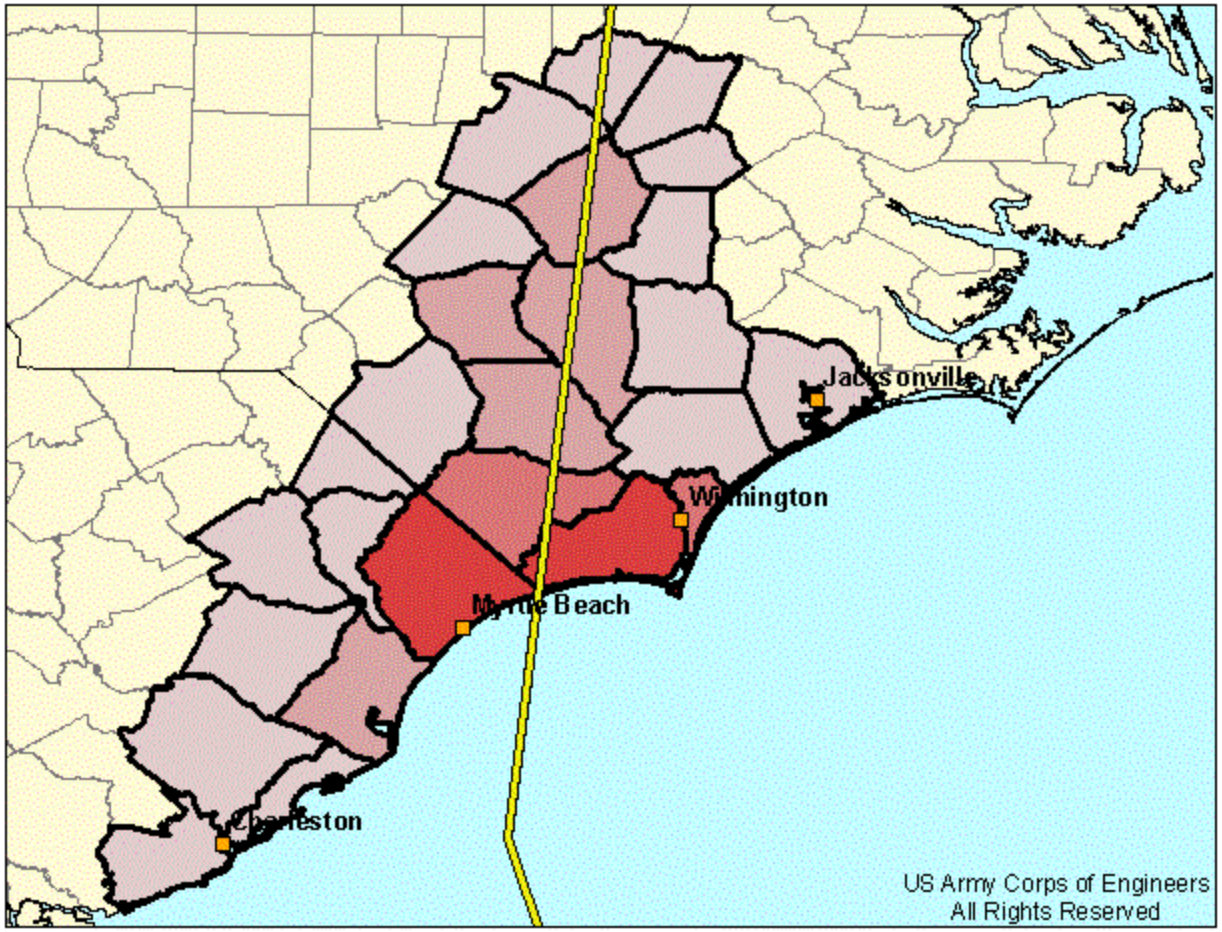
US Army Corps of Engineers

Hurricane Hazel 1954 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

North Carolina - 2,474,000 Yards
South Carolina - 1,108,000 Yards

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0900 EDT 05/15/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane hazel 1954 Debris Model

Generated By:
Siemsen, LRL 0930 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Bladen	144,000
		Brunswick	716,000
		Columbus	256,000
		Cumberland	111,000
		Duplin	59,000
		Franklin	45,000
		Harnett	41,000
		Johnston	183,000
		Nash	16,000
		New Hanover	407,000
		Onslow	5,000
		Pender	98,000
		Robeson	66,000
		Sampson	161,000
		Wake	85,000
		Wayne	74,000
		Wilson	7,000
North Carolina	2,474,000		
South Carolina		Berkeley	< 1,000
		Charleston	4,000
		Dillon	2,000
		Florence	< 1,000
		Georgetown	112,000
		Horry	985,000
		Marion	5,000
		Williamsburg	< 1,000
South Carolina	1,108,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane hazel 1954 Debris Model

Generated By:
Siemsen, LRL 0930 EDT 05/15/2008

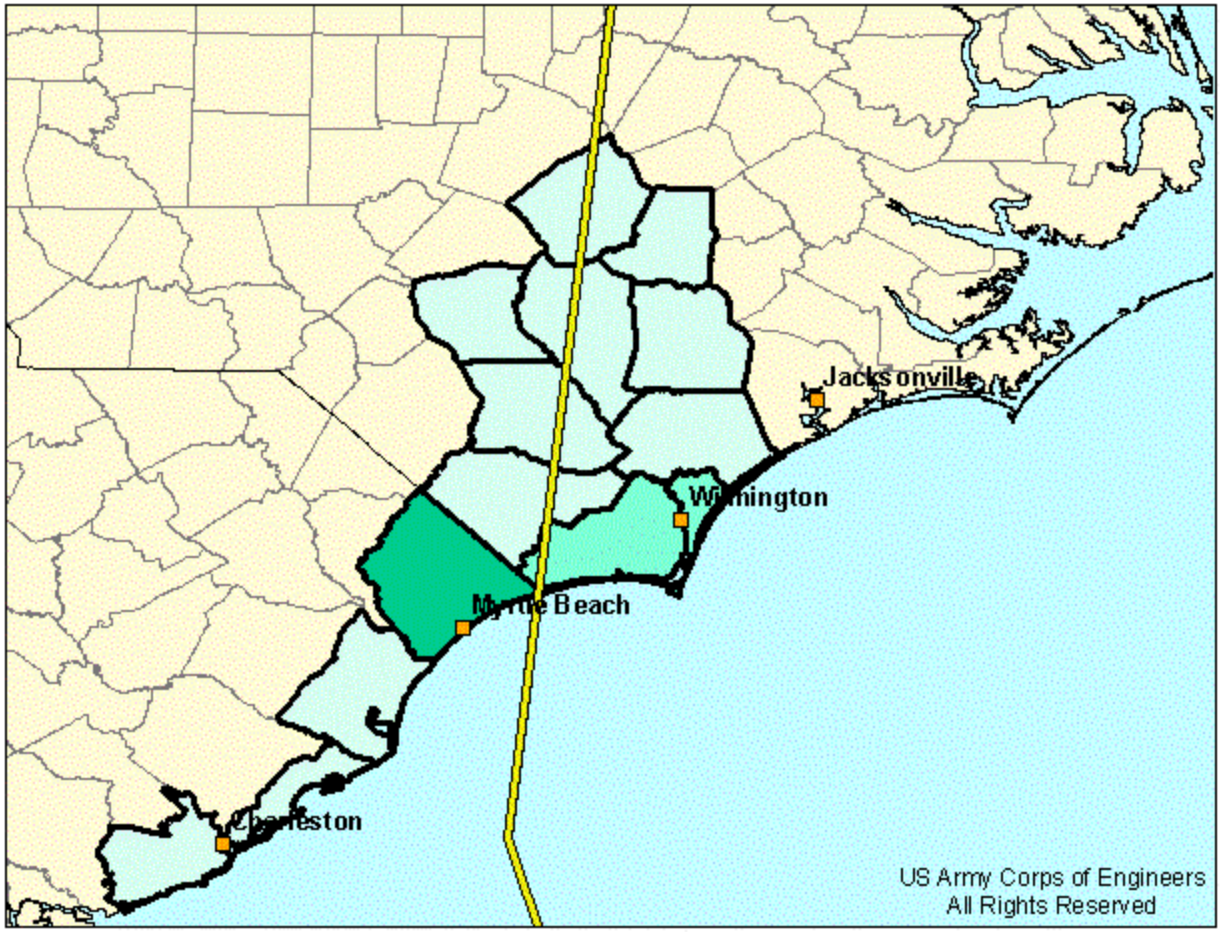
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Commodities Model

US Army Corps of Engineers

Landfall Plus About **12** Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
NC – 7/14/28 Truckloads
SC – 4/8/16 Truckloads

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC ***(0900 EDT 05/15/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane hazel 1954 Commodities Model

Generated By:
Siemsen, LRL 0930 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Bladen	2
		Brunswick	7
		Columbus	4
		Cumberland	1
		Duplin	1
		Johnston	1
		New Hanover	6
		Pender	1
		Sampson	4
		Wayne	1
North Carolina	28		
South Carolina		Charleston	1
		Georgetown	2
		Horry	13
South Carolina	16		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane hazel 1954 Commodities Model

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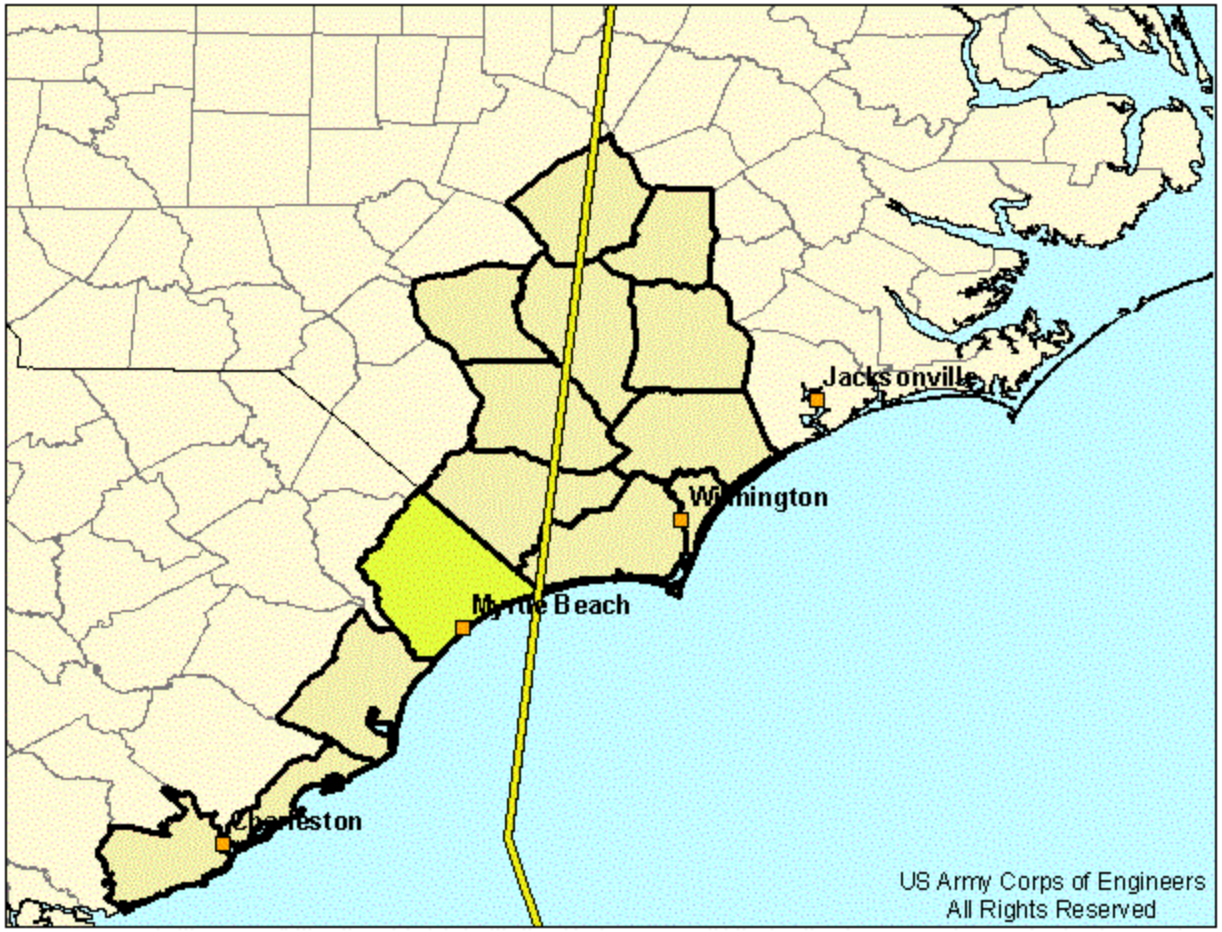
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Temporary Roofing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

North Carolina - 5,000
South Carolina - 3,200

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0900 EDT 05/15/2008) forecast. Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane hazel 1954 Roofing Model

Generated By:
Siemsen, LRL 0930 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Temporary Roofing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Bladen	400
		Brunswick	1,900
		Columbus	800
		Cumberland	< 100
		Duplin	< 100
		Johnston	< 100
		New Hanover	1,100
		Pender	200
		Sampson	600
		Wayne	< 100
North Carolina	5,000		
South Carolina		Charleston	< 100
		Georgetown	300
		Horry	2,900
South Carolina	3,200		

Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane hazel 1954 Roofing Model

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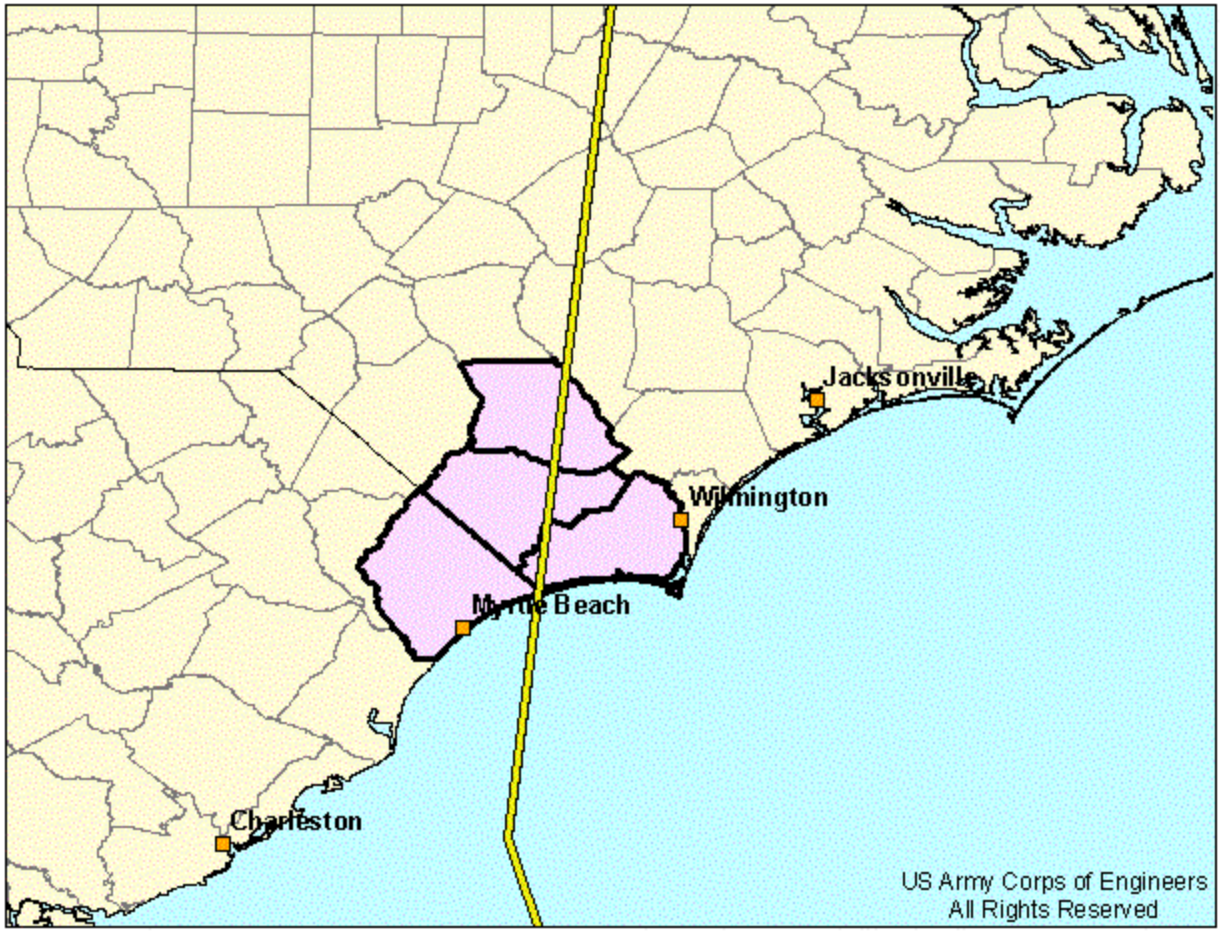
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Temporary Housing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Housing Model Results

North Carolina - 300
South Carolina - 200

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0900 EDT 05/15/2008) forecast. Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane hazel 1954 Housing Model	
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Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane Hazel 1954 Temporary Housing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Bladen	< 100
		Brunswick	300
		Columbus	< 100
North Carolina	300		
South Carolina		Horry	200
South Carolina	200		

Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane hazel 1954 Housing Model

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Sources:
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LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Population Model

Landfall Plus About 12 Hours

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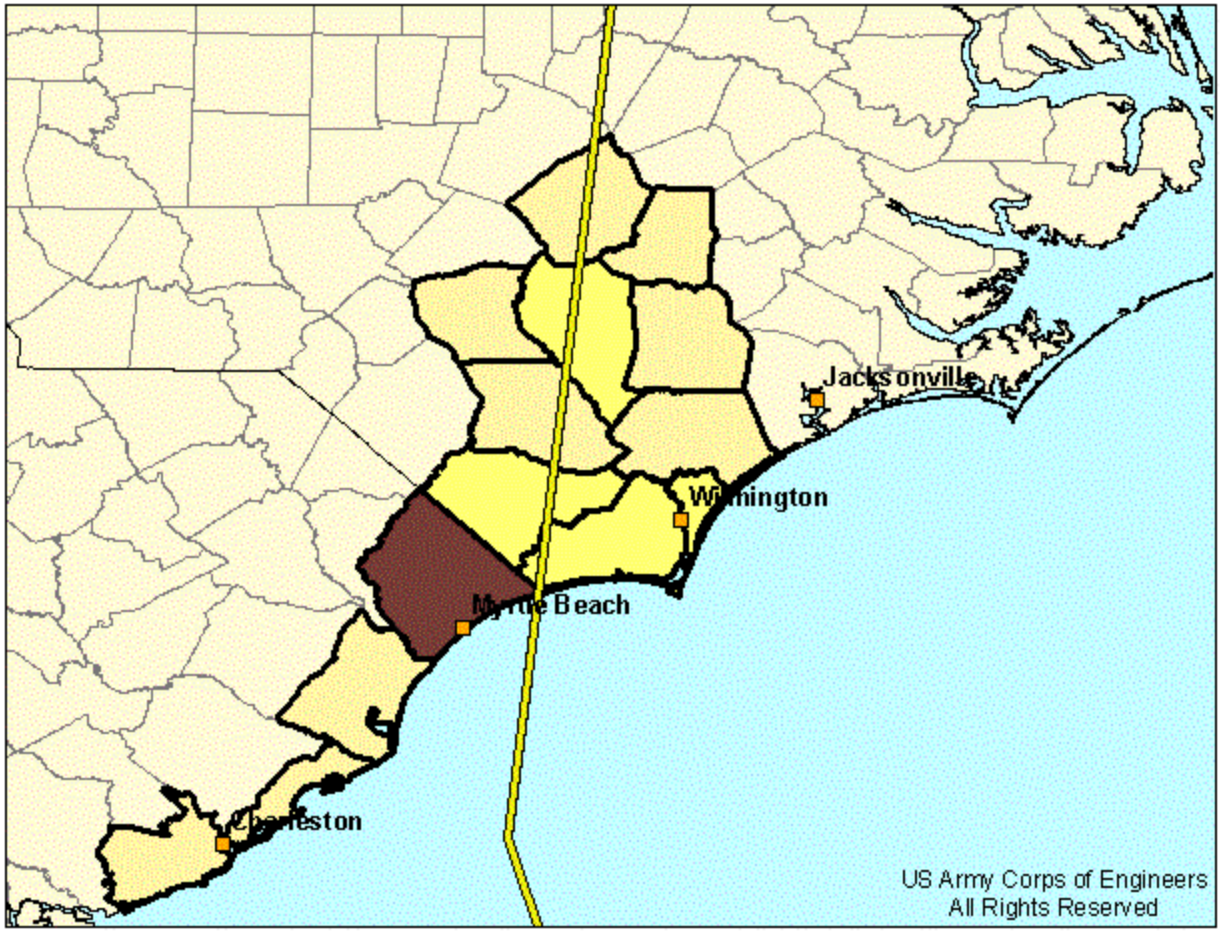

Post Landfall Population Model Results

North Carolina - 318,000
South Carolina - 203,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0900 EDT 05/15/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane hazel 1954 Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Bladen	25,000
		Brunswick	95,000
		Columbus	49,000
		Cumberland	3,000
		Duplin	< 1,000
		Johnston	3,000
		New Hanover	80,000
		Pender	12,000
		Sampson	51,000
		Wayne	< 1,000
North Carolina	318,000		
South Carolina		Charleston	< 1,000
		Georgetown	16,000
		Horry	187,000
South Carolina	203,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane hazel 1954 Population Model

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Sources:
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US Army Corps of Engineers

Hurricane Hazel 1954 Households Model

Landfall Plus About 12 Hours

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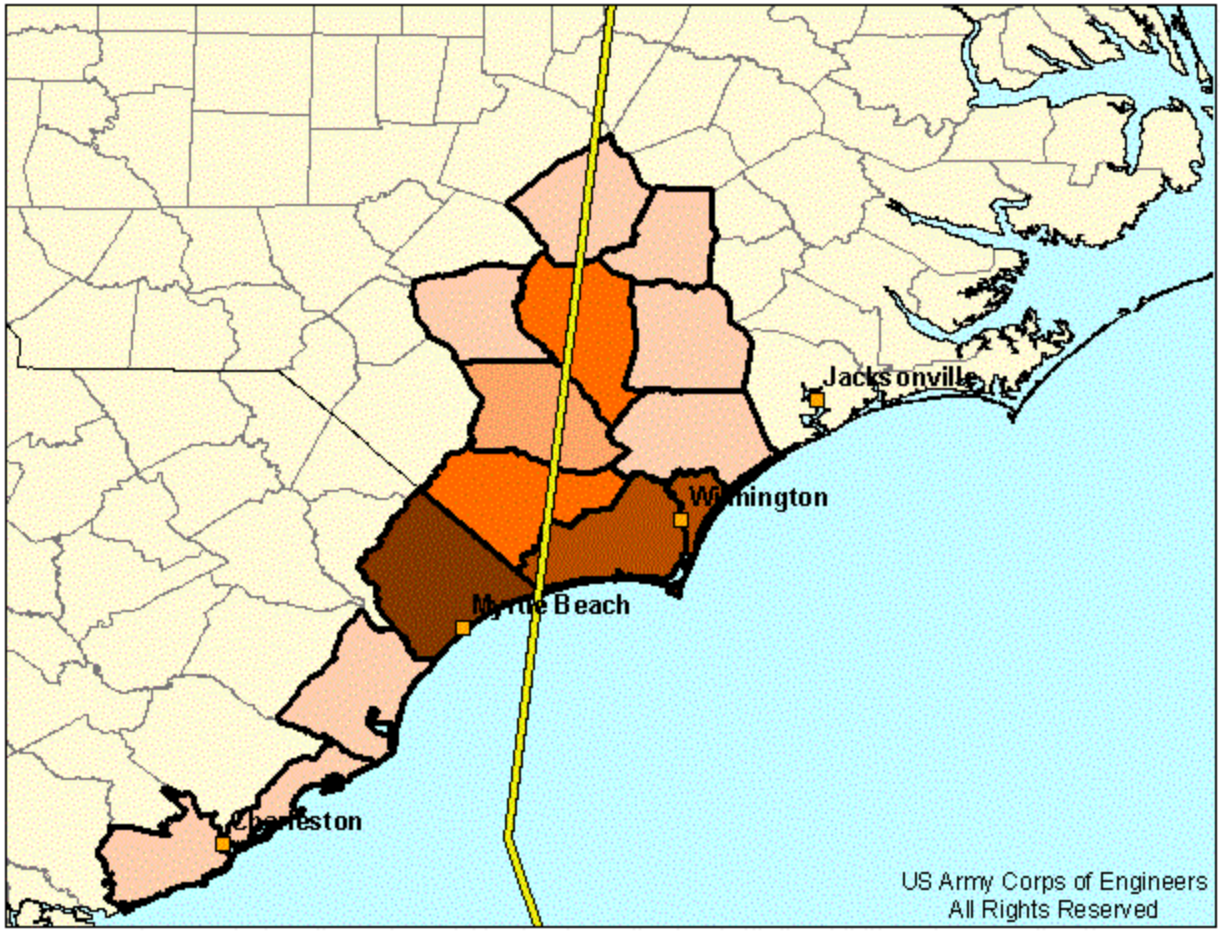

Post Landfall Households Model Results

North Carolina - 130,000
South Carolina - 87,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Wilmington, NC.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 2 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0900 EDT 05/15/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

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Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Bladen	10,000
		Brunswick	40,000
		Columbus	19,000
		Cumberland	< 1,000
		Duplin	< 1,000
		Johnston	2,000
		New Hanover	35,000
		Pender	5,000
		Sampson	19,000
		Wayne	< 1,000
North Carolina	130,000		
South Carolina		Charleston	< 1,000
		Georgetown	7,000
		Horry	80,000
South Carolina	87,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

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